# Computer Bugs Worksheet

The **algorithms** below each contain a **bug** which makes them produce unexpected **outputs**. These are known as logic errors. Can you identify the bugs and suggest a way that they could be fixed?

**1 The following flowchart shows how a price is worked out for a holiday. The total price for the holiday is worked out by following the calculation below.**

Total Price = (number of adults \* price per adult) + (number of children \* price per child)

The price per adult is £100.

The price per child is £75.

Start

End

Input

NumAdults

Input

NumChildren

TotalPrice = NumChildren\*75

TotalPrice = NumAdults\*100

When the user enters 2 adults and 2 children the system outputs 150 as the total price instead of 350. Can you work out where the bug is and how it can be fixed? Create a corrected flowchart to show the correct algorithm.

**2 The process below shows how a system works which allows a user to log into their computer. If a user enters either an incorrect username or incorrect password the system crashes. Can you add two further shapes which would allow the user to re-enter their username or password?**

Start

End

Input Username

Username correct?

Input Password

Password correct?

Login